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(FILE 'HOME' ENTERED AT 09:18:50 ON 14 MAY 2007)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPPIO' ENTERED AT 09:19:09 ON 14
MAY 2007

L1 23 S (CELL LYSTATE)
L2 12 S L1 AND ANTIBOD?
L3 9 DUPLICATE REMOVE L2 (3 DUPLICATES REMOVED)

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L1 23 S (CELL LYSTATE)
L2 12 S L1 AND ANTIBOD?
L3 9 DUPLICATE REMOVE L2 (3 DUPLICATES REMOVED)

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DUPLICATE 2

AN 1991:182809 BIOSIS

DN PREV199191097558; BA91:97558

TI GTPASE-ACTIVATING PROTEIN INTERACTIONS WITH THE VIRAL AND CELLULAR SRC KINASES.

AU BROTT B K [Reprint author]; DECKER S; SHAFER J; GIBBS J B; JOVE R

CS DEP MICROBIOL AND IMMUNOL, UNIV MICH MED SCH, ANN ARBOR, MICH 48109, USA

SO Proceedings of the National Academy of Sciences of the United States of America, (1991) Vol. 88, No. 3, pp. 755-759.

CODEN: PNASA6. ISSN: 0027-8424.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 19 Apr 1991

Last Updated on STN: 14 Jun 1991

AB GTPase-activating protein (GAP), which regulates the activities of Ras proteins, is implicated in mitogenic signal transduction by growth-factor receptors and oncoproteins with tyrosine kinase activity. Oncogenic viral Src (p60v-src) encoded in Rous sarcoma virus possesses elevated tyrosine kinase activity compared with its nononcogenic normal homolog, cellular Src (p60c-src). To examine molecular interactions between GAP and the two Src kinases, immunoprecipitates of Src or GAP prepared from cell lysates were resolved by gel electrophoresis and analyzed by an immunoblot procedure with antibodies to GAP or Src used as probes. Results suggest that p60c-src is associated with a complex containing GAP in immunoprecipitates from lysates of normal rat and chicken cells. However, GAP is not phosphorylated in p60c-src immunoprecipitates subjected to in vitro kinase reactions. By contrast, GAP undergoes tyrosyl phosphorylation in vitro when immunoprecipitates of p60v-src prepared from transformed cell lysates are incubated with ATP. Our findings suggest that p60v-src and p60c-src associate with complexes containing GAP and provide a biochemical link between both kinases and GAP/Ras signal transduction pathways. These results are consistent with the hypothesis that GAP has a role in mediating normal functions of p60c-src as well as oncogenic activities of p60v-src.

CC Cytology - Animal 02506

Genetics - Animal 03506

Biochemistry methods - Nucleic acids, purines and pyrimidines 10052

Biochemistry methods - Proteins, peptides and amino acids 10054

Biochemistry studies - Nucleic acids, purines and pyrimidines 10062

Biochemistry studies - Proteins, peptides and amino acids 10064

Replication, transcription, translation 10300

Biophysics - Membrane phenomena 10508

Enzymes - Chemical and physical 10806

Enzymes - Physiological studies 10808

Metabolism - Proteins, peptides and amino acids 13012

Metabolism - Nucleic acids, purines and pyrimidines 13014

Endocrine - General 17002

Neoplasms - Neoplastic cell lines 24005

Neoplasms - Biochemistry 24006

Neoplasms - Carcinogens and carcinogenesis 24007

Development and Embryology - Morphogenesis 25508

Genetics of bacteria and viruses 31500

Tissue culture, apparatus, methods and media 32500

In vitro cellular and subcellular studies 32600

Virology - Animal host viruses 33506

Medical and clinical microbiology - Virology 36006

IT Major Concepts

Biochemistry and Molecular Biophysics; Cell Biology; Development;

Enzymology (Biochemistry and Molecular Biophysics); Genetics;

Infection; Metabolism; Microbiology; Molecular Genetics (Biochemistry

and Molecular Biophysics); Tumor Biology

IT Miscellaneous Descriptors

ANSWER 8 OF 9 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
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 Development and Embryology - Morphogenesis 25508
 Genetics of bacteria and viruses 31500
 Tissue culture, apparatus, methods and media 32500
 In vitro cellular and subcellular studies 32600
 Virology - Animal host viruses 33506
 Medical and clinical microbiology - Virology 36006

IT Major Concepts
 Biochemistry and Molecular Biophysics; Cell Biology; Development;
 Enzymology (Biochemistry and Molecular Biophysics); Genetics;
 Infection; Metabolism; Microbiology; Molecular Genetics (Biochemistry
 and Molecular Biophysics); Tumor Biology

IT Miscellaneous Descriptors

RAT CELLS CHICKEN CELLS ROUS SARCOMA VIRUS ONCORNAVIRUS ONCOPROTEINS
ONCOGENES MITOGENIC SIGNAL TRANSDUCTION RAS PROTEINS TYROSINE KINASE
TYROSINE PHOSPHORYLATION GROWTH FACTOR RECEPTORS

ORGN Classifier

Retroviridae 03305

Super Taxa

DNA and RNA Reverse Transcribing Viruses; Viruses; Microorganisms

Taxa Notes

DNA and RNA Reverse Transcribing Viruses, Microorganisms, Viruses

ORGN Classifier

Galliformes 85536

Super Taxa

Aves; Vertebrata; Chordata; Animalia

Taxa Notes

Animals, Birds, Chordates, Nonhuman Vertebrates, Vertebrates

ORGN Classifier

Muridae 86375

Super Taxa

Rodentia; Mammalia; Vertebrata; Chordata; Animalia

Taxa Notes

Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals,
Rodents, Vertebrates

RN

9059-32-9 (GTPASE)

141349-89-5D (SRC KINASES)

80449-02-1 (TYROSINE KINASE)

60-18-4Q (TYROSINE)

556-03-6Q (TYROSINE)

87588-23-6D (SRC KINASES)

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Super Taxa

Rodentia; Mammalia; Vertebrata; Chordata; Animalia

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Rodents, Vertebrates

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80449-02-1 (TYROSINE KINASE)

60-18-4Q (TYROSINE)

556-03-6Q (TYROSINE)

87588-23-6D (SRC KINASES)

ANSWER 5 OF 9 MEDLINE on STN

AN 97027884 MEDLINE

DN PubMed ID: 8873971

TI Nitric oxide synthase 1 and nitric oxide synthase 3 protein expression is regionally and temporally regulated in fetal brain.

AU Northington F J; Koehler R C; Traystman R J; Martin L J

CS Department of Pediatrics, Johns Hopkins Medical Institutions, Baltimore, MD 21287, USA.. fnorthin@welchlink.welch.jhu.edu

NC AG 07914 (NIA)
K08-1742-01
P01-20020

SO Brain research. Developmental brain research, (1996 Aug 20) Vol. 95, No. 1, pp. 1-14.
Journal code: 8908639. ISSN: 0165-3806.

CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)

LA English

FS Priority Journals

EM 199701

ED Entered STN: 28 Jan 1997
Last Updated on STN: 28 Jan 1997
Entered Medline: 14 Jan 1997

AB Two constitutively expressed isoforms of nitric oxide synthase (NOS) have been identified, Nos1 and Nos3. Nos1 was originally identified in neuronal cells and Nos3 in endothelial cells. Because the biochemical activity of NOS is developmentally regulated, we tested the hypothesis that protein expression is also developmentally regulated. Antibodies to Nos1 and Nos3 were evaluated for specificity by immunoblotting and then used for immunohistochemistry. In fetal and adult sheep brain homogenates, Nos1 antibodies identified one immunoreactive band of proteins at 155 kDa. The Nos3 antibody detected one immunoreactive band at 145 kDa that comigrated with a reactive band in endothelial cell lysates. Immunoblots of developing neocortex demonstrated that Nos1 was enriched at early gestational ages, whereas Nos3 expression was relatively constant throughout development. By immunohistochemistry, distinct isoform-specific patterns of immunoreactivity were detected. At 60 days, Nos1 immunoreactivity is primarily localized in neuropil, but by midgestation, nonpyramidal neurons are labeled in the cortical plate. Developing neurites are Nos1-positive at 60 and 71 days, decreasing in abundance by 93 days. By 93 days the striatum is fully populated by Nos1-expressing nonprincipal neurons. In hippocampus and subthalamic nucleus, Nos1 immunoreactivity is greatest at 60 and 71 days gestation, decreasing thereafter. Immunoreactivity for Nos3 delineates cerebrovasculature maturation from a primarily radial to a highly complex branching arrangement. Hindbrain structures achieve mature organization of the cerebrovasculature before forebrain. We conclude that constitutive NOS protein expression is developmentally regulated and that distinct isoforms of NOS are regulated differentially during brain development. Expression of Nos3 parallels maturation of the cerebrovasculature, whereas the transient, region- and cell type-dependent enrichment of Nos1 in the developing brain may indicate a temporally and spatially restricted role for this enzyme in the maturation of specific neuronal populations.

CT Check Tags: Female
Animals
Blotting, Western
Brain: AH, anatomy & histology
*Brain: EM, embryology
*Brain: EN, enzymology
Electrophoresis, Polyacrylamide Gel
Immunohistochemistry
*Isoenzymes: BI, biosynthesis

*Nitric Oxide Synthase: BI, biosynthesis

Pregnancy

Sheep

Time Factors

CN 0 (Isoenzymes); EC 1.14.13.39 (Nitric Oxide Synthase)

AN 1996:592340 CAPLUS

DN 125:266537

ED Entered STN: 04 Oct 1996

TI Bradykinin-stimulated protein tyrosine phosphorylation promotes endothelial nitric oxide synthase translocations to the cytoskeleton

AU Venema, Virginia; Marrero, Mario B.; Venema, Richard C.

CS Vascular Biology Center, Dep. Pediatrics, Dep. Pharmacology, Toxicology, Med. Coll. Georgia, Augusta, GA, 30912, USA

SO Biochemical and Biophysical Research Communications (1996), 226(3), 703-710

CODEN: BBRCA9; ISSN: 0006-291X

PB Academic

DT Journal

LA English

CC 2-10 (Mammalian Hormones)

AB Stimulation of bovine aortic endothelial cells (BAEC) with bradykinin produces cycles of tyrosine phosphorylation/dephosphorylation of a 90 kDa endothelial nitric oxide synthase (eNOS)-associated protein which we have termed ENAP-1 (for endothelial nitric oxide synthase-associated protein 1). ENAP-1 interacts specifically and tightly with eNOS in BAEC and is co-immunoprecipitated from cell lysates with anti-eNOS antibodies. In addition, anti-phosphotyrosine antibodies co-precipitate eNOS. Bradykinin-stimulated tyrosine phosphorylation of ENAP-1

is blocked by the tyrosine kinase inhibitor, tyrphostin. Dephosphorylation is blocked by the tyrosine phosphatase inhibitor, orthovanadate. Treatment of BAEC with bradykinin or the tyrosine phosphatase inhibitor phenylarsine oxide promotes tyrosine phosphorylation of detergent-insoluble cytoskeletal proteins accompanied by translocation of eNOS to the cytoskeletal subcellular compartment. Translocation is blocked by the tyrosine kinase inhibitor, geldanamycin and does not appear to alter enzyme catalytic activity. Tyrosine phosphorylation-dependent association of eNOS with the cytoskeleton may have a role in targeting NO production to specific subcellular locations.

ST bradykinin endothelium nitric oxide synthase translocation

IT Phosphoproteins

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(ENAP-1 (endothelial nitric oxide synthase-associated protein 1); bradykinin-stimulated protein tyrosine phosphorylation promotes endothelial nitric oxide synthase translocations to cytoskeleton of bovine aortic endothelial cells)

IT Cytoskeleton

Phosphorylation, biological

Signal transduction, biological

(bradykinin-stimulated protein tyrosine phosphorylation promotes endothelial nitric oxide synthase translocations to cytoskeleton of bovine aortic endothelial cells)

IT Phosphorylation, biological

(-dephosphorylation, bradykinin-stimulated protein tyrosine phosphorylation promotes endothelial nitric oxide synthase translocations to cytoskeleton of bovine aortic endothelial cells)

IT Dephosphorylation, biological

(-phosphorylation, bradykinin-stimulated protein tyrosine phosphorylation promotes endothelial nitric oxide synthase translocations to cytoskeleton of bovine aortic endothelial cells)

IT Artery

(aorta, endothelium, bradykinin-stimulated protein tyrosine phosphorylation promotes endothelial nitric oxide synthase translocations to cytoskeleton of bovine aortic endothelial cells)

IT Biological transport

(translocation, bradykinin-stimulated protein tyrosine phosphorylation

promotes endothelial nitric oxide synthase translocations to cytoskeleton of bovine aortic endothelial cells)

IT 125978-95-2, Nitric oxide synthase

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(bradykinin-stimulated protein tyrosine phosphorylation promotes endothelial nitric oxide synthase translocations to cytoskeleton of bovine aortic endothelial cells)

IT 58-82-2, Bradykinin

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(bradykinin-stimulated protein tyrosine phosphorylation promotes endothelial nitric oxide synthase translocations to cytoskeleton of bovine aortic endothelial cells)

IT 60-18-4, L-Tyrosine, biological studies 79747-53-8, Tyrosine phosphatase 80449-02-1, Tyrosine kinase

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(bradykinin-stimulated protein tyrosine phosphorylation promotes endothelial nitric oxide synthase translocations to cytoskeleton of bovine aortic endothelial cells)